

a voltage converter for converting said current signals into voltage signals; and
staged current amplification means in circuit between said gain control means and
said voltage conversion means, said staged amplification means comprised of a least two
amplification stages, each said stage amplifying said current signals.

4. (Twice Amended) The system of Claim 1, wherein said gain controller
comprises a current mirror in operative connection with said staged current amplification
means.

201. Sub F1 } 5. (Amended Three Times) An improved infrared transceiver system
comprising:

a first sensor for detecting infrared signals incident thereon and converting said
signals to an electrical current signal;

a gain controller for amplifying said current signals;

a voltage converter for converting said current signals into voltage signals; and

a staged current amplifier in circuit between said gain controller and said voltage
converter, said staged current amplifier comprised of at least two amplification stages,
each of said stages amplifying said current signals, wherein said gain controller
comprises a current mirror in operative connection with said staged current amplifier and
further wherein said staged current amplifier comprises:

a first transistor, said first transistor comprising a first drain and a first gate;

a second transistor, said second transistor comprising a second source and a
second drain, said second source being in circuit with said first drain;

a third transistor, said third transistor comprising a third gate and a third source,
said third gate being in circuit with said second drain; and

a fourth transistor, said fourth transistor comprising a fourth drain and a fourth
gate, said fourth drain in circuit with said fourth gate and said first gate.

6. The system of Claim 5, wherein said current mirror is in circuit with said
second drain and said third gate.

7. The system of Claim 5, further comprising an output terminal, said output terminal being in circuit with said third source and said fourth drain.

Sub F. 1. > 8. (Twice Amended) The system of Claim 7, wherein ~~each of said~~ transistors comprises a bias voltage, ~~and wherein said bias voltage is dynamically adjustable in order to operate each of said transistors in a weak inversion range.~~

9. (Twice Amended) A improved method for detecting and amplifying incident wireless signals, said method being implemented in a infrared transceiver system comprising a signal detector, a voltage converter and a signal amplifier, said method comprising the steps of:

said signal detector converting said incident wireless signals into electrical current signals; and

said amplifier amplifying said electrical current signals, said amplifying step comprising at least two stages of amplification of said current signals.

10. (Twice Amended) The method of Claim 9, wherein each said stage of said amplifying comprises amplifying said current signals in a transistor operating in the weak inversion range.

11. (Twice Amended) An improved wireless signal receiver system, comprising:

a first sensor for detecting wireless signals incident thereon and converting said signals to an electrical current signal;

a gain controller for amplifying said current signals, said gain control means comprising at least one transistor means operating in the weak inversion range; and

a voltage converter for converting said amplified current signals into voltage signals.

12. (Twice Amended) The system of Claim 11, wherein said gain control means further comprises a staged current amplifier operating in the weak inversion range.

13. (Twice Amended) The system of Claim 12, wherein said gain controller further comprises a current mirror in operative connection with said current amplifier.

Sub 1.1 > 14. (Amended Three Times) An improved wireless signal receiver system comprising:

a first sensor for detecting wireless signals incident thereon and converting said signals to an electrical current signal;

a gain controller for amplifying said current signals; and

a voltage converter for converting said current signals into voltage signals;

wherein said gain controller further comprises a staged current amplifier operating in the weak inversion range, and a current mirror in operative connection with said current amplifier; and wherein said current amplifier comprises:

a first transistor, said first transistor comprising a first drain and a first gate;

a second transistor, said second transistor comprising a second source and a second drain, said second source being in circuit with said first drain;

a third transistor, said third transistor comprising a third gate and a third source, said third gate being in circuit with said second drain; and

a fourth transistor, said fourth transistor comprising a fourth drain and a fourth gate, said fourth drain in circuit with said fourth gate and said first gate.

15. The system of Claim 14, wherein said current mirror is in circuit with said second drain and said third gate.

16. The system of Claim 14, further comprising an output terminal, said output terminal being in circuit with said third source and said fourth drain.

Sub 1.1 > 17. (Twice Amended) The system of Claim 16, wherein each of said transistors comprises a bias voltage, and wherein said bias voltage is dynamically adjustable in order to operate each of said transistors in a weak inversion range.

18. The system of Claim 1, wherein each said amplification stage comprises one transistor means, each said transistor means comprising a bias voltage, and wherein said bias voltage is dynamically adjusted in order to operate each said transistor in a weak inversion range.